

CHAPTER III: A FORT AT FORT POINT, 1853-1868

Military engineers early recognized San Francisco Bay and its rapidly-growing city of San Francisco as the most important locations to be defended on the West Coast. Overnight San Francisco had become known worldwide as a port, supply point, and government center because of the discovery of gold in inland California. Its population expanded dramatically in a brief time. The superb harbor could shelter the fleets of the world while the Sacramento and San Joaquin rivers allowed steamboats to ascend far into the interior. Because the port was the largest on the coast, the U.S. Navy established a dockyard at Mare Island at the head of San Pablo bay. This yard contained the only dry-dock on the Pacific coast of North America. Farther inland, on Carquinez Strait, the U.S. Army located an ordnance depot at Benicia. Both installations, along with San Francisco and its commercial and banking facilities, called for adequate coastal defenses.

International rivalry in Pacific waters in the 1850s and subsequent years also increased the urgency for defense. In 1859 Great Britain and the United States almost came to blows over the ownership of the San Juan Islands lying between Washington Territory and Vancouver Island. As a consequence the Royal Navy strengthened its Pacific Squadron and established a naval base on Vancouver Island. The American Civil War caused a further deterioration of Anglo-American relations. The *Trent* affair in the fall of 1861 again strained affairs almost to a breaking point. To the south, France set up a puppet government in Mexico, raising a threat against ships carrying California's treasures to Union coffers. Also during the war, Confederate raiders in the Pacific menaced San Francisco's security.

Following the war, the first transcontinental railroad to reach the Pacific terminated in the Bay Area in 1870, further increasing San Francisco's strategic importance, and the city evolved into a metropolis as the nineteenth century grew to a close.

The United States government first took action to defend the Pacific coast at the beginning of the gold rush, in 1849, when it established a joint army and navy commission to plan the future defenses. The commission examined the Bay Area and visited the Columbia River in Oregon Territory and San Diego in southern California, ignoring Puget Sound for the time being. It concluded that San Francisco was the most important naval and military position on the Pacific Coast:

San Francisco Bay is the most important point in the United States on the Pacific. As a naval and military position it must always maintain a controlling influence over other parts of the coast and the interior. . . . Its wealth and the resources incident to it would furnish abundant means for prosecuting war that an intelligent enemy would attempt with all the force at his disposal to get possession of or to destroy or neutralize, if adequate defenses for them should not be provided in time.

While Captain Keyes trained his soldiers in the art of war at their humble post, army engineers began their expansive plans for fortifying San Francisco Bay. The Chief of Engineers, Col. Joseph G. Totten, advised the secretary of war that the glorious bay could be defended by three great works: on the promontory on the south side of the Golden Gate, then called Fort Point by Americans, where the old Spanish castillo remained; directly across the Golden Gate at the prominent cliff called Lime Point; and on rocky Alcatraz Island within the bay. Plans for Fort Point called for a large masonry fort with guns on four tiers, similar to existing works in the Eastern States. Its future garrison would number 550 officers and men.¹

Plans proceeded for the works at Fort Point and on Alcatraz Island. Construction at Lime Point, however, was delayed for sixteen long years because of the federal government's difficulties in acquiring title to the land. This delay heightened the importance of completing the defenses at the other two sites. In addition to its fort at Fort Point, the Presidio reservation was the only one in the Bay Area sufficiently large for the establishment of a large garrison in time of war. Thus, it proved its great strategic value only a few years later when its Civil War strength reached almost 2,000 men.

Engineer Lt. Col. James L. Mason arrived at San Francisco in 1853. His orders called for him to be the senior engineer officer in charge of construction at Fort Point and the general supervisor of all fortification construction on the Pacific Coast. He set to work immediately and assembled a force of carpenters, teamsters, and laborers. The first task involved demolishing the lighthouse, still unlit, that had been erected at the castillo just the year before. Next came the laborious task of reducing the rocky promontory from its elevation of ninety-seven feet to sixteen feet above sea level in order to provide a suitable base for the new work.²

1. J. L. Smith, March 31, 1850, to Secretaries of War and Navy, Letters Received, OCE, RG 77, NA; Bearss, *Fort Point*, pp. 9-10. In contrast, the post strength at the Presidio at that time was about fifty officers and men.

2. Francis Ross Holland, Jr., *America's Lighthouses, Their Illustrated History*

By September 1853 the engineers had erected a wood frame barracks, capacity forty men, mess hall, and stables for the civilian workmen on the bluff about 1,000 feet southeast of the fort site. By that time Mason, who had contracted yellow fever while crossing the Panama isthmus, had become seriously ill. He died on September 5, less than three months after his arrival in California. The work continued and even before the arrival of a new senior engineer, a second barracks, powder magazine, office, and latrine became part of the engineer compound. A blacksmith shop and a powder magazine stood nearer to the work area, on the neck of the promontory. Additional workers, including masons, blasters, and quarrymen joined the force and applied themselves in leveling the promontory. The new senior engineer, Maj. John G. Barnard, arrived on the scene on the last day of the year, 1853.³

In one of his first reports to Colonel Totten, Barnard wrote, "for the sake of convenience in identifying and in preparing accounts etc. that the name of the old Spanish work San Joaquin be at once given to the new work," or, if that was unacceptable, he recommended Fort Kearny. Other officers would offer other names for the fort, but the War Department continued to refer to the work as "the fort at Fort Point."⁴

Barnard ordered the construction of additional barracks to accommodate 100 laborers and up to 100 additional mechanics. He also directed the construction of a plank road along the foot of the escarpment from the fort site 2,000 feet east to where he planned to construct a wharf. This 500-foot wharf was completed in June 1854. That summer the plant at the lower level increased with the addition of a mortar mill, cement storehouse, and cranes at the wharf. Unhappy with his West Coast assignment, Major Barnard requested a transfer. It was granted and he returned east in November 1854. His replacement, the experienced Lt. Col. Rene DeRussy, arrived at San Francisco that same month.⁵

(..continued)

Since 1716 (Battleboro, VT: Stephen Green, 1972), pp. 155-156. Construction of the fort and details of its appearance are not discussed herein. That history has been adequately detailed in Edwin C. Bearss, *Fort Point, Historic Data Section* (Denver: National Park Service, 1973).

3. Bearss, *Fort Point*, pp. 20-21 and 28.

4. Barnard, January 31, 1854, to Totten, Letters Received 1838-1866, OCE, RG 77, NA. In the beginning the fort did not receive a formal name. Not until 1882 did the War Department cut orders naming the fortification Fort Winfield Scott in honor of the American leader during the Mexican War. War Department, General Orders 133, November 25, 1882. The public, however, then and since has simply called the work Fort Point.

5. Bearss, *Fort Point*, pp. 47, 49, and 58-59.

DeRussy and his family found living expenses in San Francisco to be exorbitant. Rent alone took nearly all his income. He wrote to Washington requesting permission to build a house on the military reservation at his own expense, "on the eminence immediately in front of the wharf." The Chief of Engineers approved the construction of a two-story, wood-frame house measuring 26½ feet by 30½ feet. DeRussy said it would cost him \$2,300 and later he would either sell it to the government or rent it to officers. Washington approved the construction but with conditions, "it being understood that the government is not expected to purchase the building and it must be removed when desired by the government and must not be sold without the approval of the War Department." Ten years later, when DeRussy lived in the city, the Engineer Department, confused or not, recommended approval of a request from the Department of the Pacific's Maj. Gen. Irvin McDowell to purchase "certain buildings on the Government reserve," with a reference to DeRussy.⁶

Because of the unsatisfactory quality of bricks on the commercial market, DeRussy opened his own brickyard, also on the bluff, in 1855, and hired brickmakers to carry out the operation. This yard produced satisfactory bricks until it closed in the spring of 1858. Also in 1855 he began construction of a ten-gun battery on the escarpment to the south of the fort. When he learned that additional armament and ordnance supplies were en route, he notified Totten that he would erect temporary buildings to protect the public property. Presumably these structures stood near the wharf. DeRussy also said he would ask that soldiers from the Presidio's Company M, 3d Artillery, be sent to guard the supplies.⁷

San Francisco James Mason Hutchings, the future founder of *Hutchings' California Magazine*, visited Fort Point on June 3, 1855:

Fine, pleasant – breezy in afternoon. From San Francisco to the Presidio, Fort Point, Seal Rock, and back again. This morning Mr. Ayer invited me to take a walk with him toward the Presidio, which I accepted, not expecting to be long away. Went up Pacific street – passed the Lagoon the place of Washerwoman, saw two full-rigged clippers entering the harbor. Passed Fort Point. Here the Government is busy with about 300 [*sic*] men employed in fortifying the harbor. Several carriages were ready to receive their

6. DeRussy, March 9, 1855, to Totten, Letters Received 1838-1866, OCE; Engineer Department, May 25, 1855, to DeRussy, and February 3, 1865, to Secretary of War, both in "Fort Point and Presidio Reservation," Bulky File, all in RG 77, NA.

7. DeRussy, July 14, 1855, to Totten, Letters Received, 1836-1866, OCE, RG 77, NA; Bearss, *Fort Point*, pp. 63 and 73.

guns, while a wall of immense thickness covers the embrasures. We sat and listened to the sea, watching the varying tints of the landscape, or gathered wild strawberries in profusion. They are finely flavored and grow on every sandy knoll.⁸

Fort Point acquired a new light in 1855 when the Lighthouse Board had a fifty-two-foot tower and a fifth-order Fresnel light installed on the leveled land immediately to the north of the new fort. The district inspector also had a 1,100-pound, machine-operated fog bell installed, as well as quarters for two lighthouse keepers. These latter stood on the bluff immediately south of the fort.⁹

DeRussy remained at San Francisco for more than two years as the construction proceeded. Not a young man, he soon felt the passage of time and in the fall of 1856 became ill with tuberculosis. The Presidio's surgeon, Robert Murray, examined the colonel and recommended that DeRussy leave California as soon as possible. A sympathetic Totten readily approved a transfer and DeRussy left San Francisco for the East in March 1857. But momentous events would cause his return a few years later.¹⁰

When Zealous B. Tower took over as senior engineer in the spring of 1857, construction at Fort Point was in full swing. He counted 132 men employed at the fort, including stonemasons, brickmasons, blacksmiths, teamsters, kiln builders, and laborers. It is probable that most lived on the site in the barracks. They all had meals supplied by a government contractor named John Richardson. Major Tower came face to face with a major problem when the men complained that Richardson served them "unwholesome food, odds and ends" collected from the cheapest sources. Tower was slow to react and his labor force threatened to go on strike. He finally took action and canceled Richardson's contract, notifying the men they were now responsible for their own boarding arrangements. The trouble passed. The pace of construction increased and by 1858 about 200 men stopped at the pay table. The records showed that about one-third of them commuted from the city via omnibus. The *Alta California* reported, "Bowman & Gardner's omnibusses run every two hours, from the City Hall to the fort in process of construction, passing the Presidio barracks." The stables were practically deserted by then when the

8. James Mason Hutchings, *Diary*, entry for June 3, 1855, Library of Congress, Washington, D.C. From a typed copy by Cosie Hutchings Mills. Historian Peter Palmquist, San Francisco, is currently editing the diary.

9. Holland, *America's Lighthouses*, pp. 157-159; Bearss, *Fort Point*, p. 94

10. Bearss, *Fort Point*, pp. 95-96; Asst. Surg. Robert Murray, January 4, 1857, Letters Received 1838-1866, OCE, RG 77, NA.

engineer sold off most of the livestock that had consisted of four horses, thirteen mules, and four oxen.¹¹

Major Tower transferred to the East in the summer of 1858 and after some delay Capt. Jeremy F. Gilmer succeeded him. During the interim Lt. George Washington Custis Lee, eldest son of Col. Robert E. Lee, acted as supervising engineer. A visitor to the fort in 1859 described the scene, "The present beautiful and substantial structure was commenced in 1848 [sic] and is now nearly completed. It is four tiers in height, the topmost of which is 64 feet above low tide; and is capable of mounting 150 guns, including the [barbette] battery at the back, of 46, 64, and 128 pounders, and during an engagement, can accommodate 2,400 men [!]."¹²

As the fort neared completion by 1860 and work commenced on a large protective seawall, events in the eastern states resulted in the temporary stoppage of construction funds. Abraham Lincoln won the presidential election in November. Southern leaders talked secession. The nation rushed toward civil war. At San Francisco the department commander, Col. Albert Sidney Johnston, who would soon join the Confederacy, took steps to guard federal property.¹³

Colonel Johnston ordered the Presidio's commander, Lt. Col. Charles S. Merchant, 3d Artillery, to assume general supervision over the fort and to tighten security, even while the engineers worked strenuously to prepare it for occupancy. Merchant directed Capt. John M. Lendrum with three officers and fifty-five men of Company I to occupy "The Fort at Fort Point" on February 15, 1861. A few days later the Department issued a lengthy list of instructions to Merchant:

1. There must be, 24 hours, 2 sentinels – one at the gate, and one on the barbette battery.

11. Bearss, *Fort Point*, pp. 107, 118, and 148; *Alta California*, June 10, 1858.

12. R.R. Olmsted, ed., *Scenes of Wonder & Curiosity from Hutchings' California Magazine, 1856-1861* (Berkeley: Howell-North, 1962), p. 84.

13. Back in Washington, Keyes, now a lieutenant colonel and military secretary to the aged Gen. Winfield Scott, attended a meeting with Scott and Secretary of State William H. Seward. Seward told the others that U.S. Senator J.W. Nesmith from Oregon had informed him that Johnston was unfaithful to the Union. Scott decided to replace him. Keyes, anxious to return to the West Coast to check on his real estate investments, hoped that he would be sent to California to investigate the matter. Such was not to be. Brig. Gen. Edwin V. Sumner departed for San Francisco. Although Johnston wished to join the Confederate Army, he carried out his duties at San Francisco with honor until relieved. See Robert J. Chandler, "The Mythical Johnston Conspiracy Revisited: An Educated Guess," *The Californians* 4(1986): 36-41; Keyes, *Fifty Years*, p. 420.

2. When gates are opened or closed it must be under the supervision of the officer of the day, who keeps the keys.
3. The postern gate must never be opened in the morning until the sentinel on the barbette tier has examined the circuit of the work, nor the main gate be opened until the grounds within musket range are examined by a patrol.
4. When the patrol is absent, the guard must be under arms.
5. Fastenings of lower shutters are to be examined by the officer of the day at retreat.
6. When moving powder and stores from the outer storehouses, the remainder of the garrison must be under arms and properly stationed.
7. No smoking allowed on the parade ground.
8. Men are not allowed on the barbette battery except on duty.
9. Orders will be given to prevent destruction of engineer property.
10. Cartridges will be prepared for flank guns on the land face and placed in the service magazine.
11. The main magazine must never be opened or entered except under the supervision of an officer.
12. Until all guns are mounted for the defense of the ditch, loaded shells must be kept on the land face of the barbette over the main gate.
13. The quartermaster must immediately prepare rough gun racks.

14. The regimental quartermaster is to be placed on duty at the fort until the place is put in order.¹⁴

These orders illustrated the Army's concerns about a land attack, perhaps by Californians favoring secession. Nevertheless, coastal guns had already been installed in the casemates: seventy-nine heavy guns, two 12-pounder flank howitzers, and five Coehorn mortars. Early in March two companies, A and B, of the 3d Artillery arrived at San Francisco from Fort Vancouver on the Columbia. They replaced Company I at the fort, that unit transferring to Alcatraz Island. While the garrison strength fluctuated during the next two or three years, an average of five officers and 130 enlisted men manned the fort. The two companies from Fort Vancouver brought their laundresses. These women moved into the former civilian barracks in the engineer compound on the bluff. In May the engineers allowed the artillery's sutler, name unknown, to occupy a portion of one of their buildings.¹⁵

In April 1861 Brig. Gen. Edwin Sumner replaced Colonel Johnston as commander of the reorganized Department of the Pacific. One of Sumner's first orders called for the separation of the fort from the Presidio: "The several stations in this harbor, viz, Fort Point, Alcatraz island, and the Presidio will be independent of each other."¹⁶

Lisle Lester, the editor of the *Pacific Monthly*, described the fort in May 1864, "A stone sea wall is now in progress. . . . One [old Spanish gun] is used as a hitching post, while two others are placed as ornaments at the entry. . . . The soldiers are on constant drill, loading and reloading, and kept busy in cleaning the guns, ammunition of the Fort. This Fort is highly romantic in its situation, hugging the great bluff on one side of the narrow passage across to the high rocky steeps [Lime Point] on the other side. . . .

By early 1865 Fort Point's strength had grown to fifteen officers and 450 enlisted men. A good part of the increase was caused by the arrival of six companies of California volunteers and their laundresses. For

14. AAG W.W. Mackall, Department of California, February 18, 1861, to Lt. Col. C.S. Merchant in U.S. Congress, *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*, hereinafter cited as *ORs* (Washington: Government Printing Office, 1880-1901), Series 1, vol. 50, part 1, p. 446.

15. Post Returns, the Fort at Fort Point, 1861-1862, Roll 943, Microcopy 617, NA; Bearss, *Fort Point*, pp. 152-155. Once again, Keyes influenced policy. On January 14, 1861, he urged General Scott to order the two Fort Vancouver companies to San Francisco. Scott did so a few days later. Keyes, *Fifty Years*, pp. 353 and 355.

16. Special Orders 88, Department of the Pacific, May 23, 1861, *ORs*, Series 1, vol. 50, part 1, p. 448.

the men, the quartermaster department constructed two large, one-story, frame barracks below the bluff and east of the engineer wharf. Each measured 30 feet by 125 feet and together they had a capacity of 400 men. Four mess rooms stood behind the barracks. The laundresses were not as lucky. They occupied five small shacks 1,500 feet farther east, also below the bluff. Some of the officers occupied quarters on the bluff. The largest of these, measuring 32 feet by 42 feet, located to the south of the wharf, most likely was the former residence, now enlarged, that Colonel DeRussy had constructed in 1855 and which the Army had purchased in February 1865. It now housed the commanding officer of Fort Point. The other two sets measured 32 feet by 38 feet each and stood a short distance to the southeast.¹⁷

When the war started many officers on the West Coast returned to the East, some joining the Union Army, some the Confederate. The shortage of engineer officers in the Bay Area forced General Totten to order Colonel DeRussy to return to San Francisco where he arrived in November 1861. In addition to undertaking the construction of new fortifications at San Francisco Bay, he oversaw continuing improvements at Fort Point. In September 1863 the Bay Shore and Fort Point Road Company applied to him to construct a macadamized road through the Presidio to Fort Point. DeRussy considered such a road to be of great advantage to Fort Point and since it would not cost the federal government money, he recommended approval. In the spring of 1864 the War Department finally approved the company's request. Although the Bay Shore and Fort Point Road Company proceeded to construct a road from San Francisco toward the Presidio, the road appears to have terminated at or near the Harbor View resort just outside the reservation boundary. The earliest detailed map of that area, prepared by the Army in 1870, shows an unimproved trail in the Presidio that extended from the boundary along the bay shore to join the main road that ran from the Presidio to Fort Point, a trail similar in nature to many others within the Presidio. A few years after the war, when the Army constructed new fortifications at Fort Point, it became clear that vacationers at Harbor View were not welcome at Fort Point.¹⁸

Another issue that came DeRussy's way, early in 1865, concerned gunpowder. The engineers on the Pacific Coast relied on the California Powder Company for their supply of gunpowder for explosive

17. Bearss, *Fort Point*, p. 202 and 202n. Other structures in the vicinity of the wharf at this time included a stable, kitchens, ordnance yard, and other small structures. An 1865 map of the area has not been located. An excellent, map of the Presidio prepared in 1870 locates many of the features.

18. Various correspondence between the Engineer Department and DeRussy from September 14, 1863 to May 3, 1864, "Fort Point and Presidio Reservation, 1845," Bulky File, OCE, RG 77, NA.

purposes. The chief of engineers asked DeRussy and his associates to report on the advisability of locating a private magazine on public domain. DeRussy replied that "in order to encourage the manufacture by private parties of munitions of war on the Pacific Coast" it would be acceptable to have one or more private magazines erected on the Presidio reservation. Probably because of the winding down of the war, this idea, like the road proposal, died quietly.

The south side of the Golden Gate got navigation light three during the Civil War. The land on which light two had been located in front of the fort had been eroding, and plans for a seawall further reduced the area. The Lighthouse Board selected a site on top of the fort, above the north stairway. Engineers built a metal tower there and light three was lit in January 1864. The fog bell moved to a new location at the same time; it was fastened to the outside wall of the fort as was the operating machinery.¹⁹

The American Civil War all but ended in April 1865 at the village of Appomattox Court House in Virginia. In California Col. Rene DeRussy's health, long ravaged by disease, steadily declined. Toward the end he was confined to his residence at 41 South Park St. in the city. On November 23, 1865, aged 75 years, he died. Fifty-eight years of his life had been in the U.S. Army; fifty-eight years dedicated to the nation's defense.²⁰

Through the war elements of the 3d Artillery Regiment, 9th Infantry Regiment, and the 8th California Volunteer Infantry had guarded the Golden Gate at Fort Point. Between 1861 and 1865 seven officers served as commander: Capt. John H. Lendrum, 3d Artillery; Lt. John Kellogg, 3d Artillery; Capt. William Austine, 3d Artillery; Capt. James Van Voast, 9th Infantry; Capt. George P. Andrews, 3d Artillery; Capt. Joseph Stewart, 3d Artillery; and Col. Allen L. Anderson, 8th California Volunteers. All served in the Army honorably. Two regulars reached the rank of colonel: Andrews, 3d Artillery, in 1882, and Van Voast, 9th Infantry, also in 1882, both "Presidio regiments."

The post returns for the fort showed the military units and their length of occupancy through the war:

19. Ibid., Engineer Department, January 12, 1865, to Board of Engineers for the Pacific Coast; and Board of Engineers, Pacific Coast, January 20, 1865, to the Engineer Department; Bearss, *Fort Point*, pp. 196-17.

20. Bearss, *Fort Point*, p. 199; Heitman, *Historical Register*.

Company I, 3d Artillery, February-March 1861
Company A, 3d Artillery, March-May 1861
Company B, 3d Artillery, March 1861-September 1863
Company G, 3d Artillery, May-October 1861
Company K, 9th Infantry, December 1861-February 1863
Company I, 9th Infantry, February-July 1863
Company H, 3rd Artillery, July 1863-August 1865
Company I, 9th Infantry, October 1863-December 1864
Company A, 8th Infantry, California, November 1864-February 1865
Company B, 8th Infantry, California, December 1864-April 1865
Company E, 9th Infantry, December 1864-September 1865
Company C, 8th Infantry, California, January-October 1865
Company D, 8th Infantry, California, January-October 1865
Company K, 8th Infantry, California, February-October 1865
Company I, 8th Infantry, California, April 1865
Company I, 9th Infantry, May-September 1865

By the end of 1865 the fort's armament had increased to 96 guns: eighty heavy, mounted; eleven heavy, unmounted, and five heavy Mexican trophies.²¹

The strength of the post gradually declined as elements of the 2d Artillery Regiment replaced the wartime troops. Then, in September 1867, Company D, Battalion of Engineers, arrived from New York, replacing the artillery. This outfit of three officers and about 120 men remained at Fort Point until March 1868. That month the company transferred to Yerba Buena Island in San Francisco Bay. The Department of California issued orders annexing "the Post of Fort Point" to the Presidio of San Francisco.²²

Fort Point, constructed at great expense, served through its first war without an enemy in sight. Its guns fired salutes on national holidays and when news of Union victories arrived. In 1863 its guns exchanged salutes with a British warship. The only problem with that was the fact that Alcatraz had been designated as the sole post to offer salutes to vessels of war.

One significant result of the Civil War became obvious early in the conflict. Rifled artillery and other technical advances on both land and sea demonstrated with ease that the traditional masonry forts had

21. Post Returns, November 1865. The "Mexican trophies" were probably the ancient Spanish cannon at the Presidio today. Bearss, *Fort Point*, p. 231, lists an 1867 inventory of mounted guns at the fort: six 24-pounders, eleven 32-pounders, thirty-eight 42-pounders, eight 8-inch columbiads, and two 10-inch columbiads.

22. Special Orders 38, Headquarters, Department of California, March 17, 1868, in the Post Returns, March 1868.

become obsolete. The Engineer and Ordnance departments began experiments to find a satisfactory solution for future coastal defense. In 1868 the Army announced its plans for postwar batteries. Instead of guns mounted in casemates in masonry forts, the guns of future batteries would be protected with thick parapets of sand.²³

Work soon began on two new batteries, East and West, on the bluffs above the fort. Associated construction included moving storehouses, mortar mill, carpenter shop, and blacksmith shop to a site near the wharf. Also, the engineers built a 20,000-gallon water tank for fire protection and laid piping from a reservoir to the tank. An important undertaking involved laying rail tracks from the renovated engineer wharf westward through the ordnance yard to the fort, a distance of about 2,000 feet.²⁴ The fort at Fort Point was not yet finished.

23. Erwin N. Thompson, *Seacoast Fortifications, San Francisco Harbor, Golden Gate National Recreation Area* (Denver: National Park Service, no date), pp. 80-82.

24. Bearss, *Fort Point*, p. 208.